

"APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000100410006-9

AFANASOV, I. A.

Chechen-Ingush Veterinary Research Station. Trudy VIEW 23:405 '59.  
(MIRA 13:10)

(Chechen-Ingush A.S.S.R.--Veterinary research)

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CIA-RDP86-00513R000100410006-9"

AFANASOV, I.A.

Action of biomycin in infectious atrophic rhinitis in swine.  
Veterinaria 36 no.4:64 Ap '59. (MIRA 12:7)

1. Direktor Checheno-Ingushskoy nauchno-issledovatel'skoy veteri-  
narnoy stantsiyey.

(Swine--Diseases and pests)  
(Aureomycin)

~~AFANASOV, Igor' Mikhaylovich, kandidat tehnicheskikh nauk; CHAPSKIY, O.U.,  
redaktor; MOLODTSOVA, N.G., tekhnicheskiy redaktor~~

[Regulation of diesel fuel injectors] Regulirovka toplivopodaiu-  
shchey apparatury dizelei. Moskva, Gos. izd-vo selkhoz. lit-ry,  
1956. 85 p.  
(Diesel engines)

(MLRA 9:10)

AFANASOV, N.I., gornyy inzhener

Surveys in vertical shaft workings with a connecting stopes. Gor. zhur.  
no. 3:54-55 Mr '55. (MLRA 8:7)  
(Shaft sinking)

AFANASOV, P. I.

Treatment of Dysentery by Acidophilene.

VOYENNO-MEDITSINSKIY ZHURNAL (MILITARY MEDICAL JOURNAL), № 12, 1954. p. 35

AFANASOV, S. G.

S. G. Afanasov and P. M. Bubnov, "Wide-range Small-size Oscillator System of the Decimeter Band." Scientific Session Devoted to "Radio Day", May 1958, Trudrezervizdat, Moscow, 9 Sep 58.

Construction of the triode decimeter band oscillators is analyzed, in which strip transmission lines with periodically varying parameters are used as oscillator loops.

Methods are presented to compute such loops and their experimental characteristics are given.

06495  
SOV/141-58-4-11/26

AUTHOR: Afanasov, S.G.

TITLE: Electronic Frequency Trimming of UHF Triode Oscillators  
(Elektronnaya perestroyka chastoty triodnykh  
generatorov SVCh diapazona)PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika,  
1958, Nr 4, pp 100-104 (USSR)

ABSTRACT: Triode oscillators are employed at dm and cm wavelengths where they may have certain advantages in comparison with klystrons. The oscillators of this type are sometimes required to work as frequency modulators. The problem is investigated in this work. It is assumed that in the analysis of a triode oscillator operating with large anode voltages, the transit time in the anode-grid space can be neglected. The anode current pulse can then be determined, if the convection current in the grid plane is known. The current is given by

$$i_{gk} = 10^{-6} \frac{(\alpha V)^{3/2}}{d^2 g_k} q_k f_{gk}(\omega t, \gamma, \beta)$$

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### Electronic Frequency Trimming of UHF Triode Oscillators

where  $Q_k$  is the area of the cathode,  $d_{gk}$  is the distance between the grid of the cathode;  $\beta = -V_{go}/\alpha V$ ;  $\gamma = V/V_0$ ;  $\omega$  is the frequency and  $t$  is time. If the anode current pulse is expanded into a Fourier series, the amplitude and phase of the first harmonic of the intensity current is given by:

$$\tilde{J}_1(\gamma, \beta) = K_j \frac{1}{\pi} \int_{\omega t_1}^{\omega t_2} f_{gk}(\omega t, \gamma, \beta) e^{-j\omega t} d(\omega t)$$

where  $K$  is a constant, while  $t_1$  and  $t_2$  denote the instants of the start and the termination of the anode current pulse. The functions  $f_{gk}$ , which determine the convection current in the grid plane, were tabulated in Ref 1. These values are used to determine the real and imaginary component of the convection current and the results are shown in Table 1, p 102. Functions  $f_{gk}$  are plotted in Fig 1 against  $\omega t$ . From Fig 1 it is seen that an increase in  $\gamma$  leads to an increase in the phase shift between the anode current pulse and the voltage

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- tuning range

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Electronic Frequency Trimming of UHF Triode Oscillators

is strongly dependent on frequency, while the output power is almost constant especially in the case of the tube, type GSS-15. There are 4 figures, 1 table and 1 Soviet reference.

ASSOCIATION: Issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Radiophysics Research Institute of the Gor'kiy University)

SUBMITTED: 18th April 1958

Card 4/4

11 часов  
(с 10 до 22 часов)

Г. Н. Ромашт  
Водоудалые машины электрические пуски с ме-  
дицинским применением транзисторов.

С. Г. Афонин  
О управлении частотой транзисторного генератора

А. Н. Чекин  
Низкочастотные пуски спаренных электрических  
двигателей

М. С. Арабов  
Метод излучения колебательных радиосигналов ви-  
дикторами высокочастотных фонарь в инфракрасные эле-  
ктронные лампы.

12 часов  
(с 10 до 16 часов)

Е. В. Багров,  
В. В. Кислов,  
Л. С. Чирко  
Взаимодействие электрического поля с пленкой.

36

Г. А. Добе  
Генераторный агрегат СВЧ плавленый.

А. Н. Бондарев,  
Н. Н. Золотухин,  
С. С. Шахматов

Высокочастотное усиление частоты из радиогенер-  
атора электрических пусков.

А. Н. Баранов,  
Е. Е. Бакланов,  
Н. Н. Елисеев,  
А. В. Зарин

Электронные контактные лампы с электродами из  
однотипных сплавов из проволочки

6 СЕКЦИЯ РАДИОИЗМЕРЕНИЯ

Руководитель Г. А. Бурун

8 часов  
(с 10 до 16 часов)

А. Г. Смирнов  
О перспективных возможностях генера-  
ции генераторами для стабилизации частоты

37

Report submitted for the Centennial Meeting of the Scientific Technological Society of  
Radio Engineering and Electrical Communications in A. S. Popov (VKhRKh), Moscow,  
8-12 June, 1959

~~9-(2,3)~~ 9,4200

66318

SOV/162-59-1-12/27

AUTHOR: Afanasov, S.G.

TITLE: The Reactive Properties of Planar Electron Gaps

PERIODICAL: Nauchnyye doklady vysshey shkoly, Radiotekhnika i elektronika, 1959, Nr 1, pp 98-104

ABSTRACT: The author recommends using planar electron gaps, formed by the grid and the anode of a triode, for electronic retuning of the frequency of oscillatory circuits and oscillators in the centimeter and decimeter wave range. First, he discusses the impedance characteristics of the grid - anode gap of a triode operating with two electron flows. The impedance of the electron gap is calculated as a function of the electron transit angle in the space between the anode and the grid. It is assumed that the electrons enter the space between the grid and the anode with a constant initial velocity  $v_0$ , which is different from zero, and do not reach the plane of the anode, but return to the grid, ie. a negative voltage  $E_0$  has been ✓

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SOV/162-59-1-12/27

The Reactive Properties of Planar Electron Gaps

applied between the grid and the anode; the electrons do not re-enter the space between grid and anode; the variable components of the high-frequency field are considerably smaller than the constant components; the field, created by the space charge, and the distortion of this field due to the fringe effect, are negligible. The results of these calculations are presented graphically in Fig 1. The impedance characteristics of electron gaps were investigated experimentally for small and large amplitudes of the high-frequency field. The grid-anode gaps of GI-11B and GI-12B metalloceramic triodes were used for the experiments. The gap impedances were measured with ILD-1 Lecher wires at a frequency of 600 Mc. The typical dependence of the relative changes of the electron gap capacitance on the electron flow conditions is shown graphically in Fig 2. This graph shows that the voltage between the grid and the anode changes from high positive to low negative values. This means that a single

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SOV/162-59-1-12/27

The Reactive Properties of Planar Electron Gaps

electron flow occurs with positive voltage values and a dual flow with negative values, ie. the electrons return to the grid in the latter case. The impedance formulas of F.R. Levellin may be used for explaining the results obtained for a single electron flow. When reducing the positive anode voltage, the electron transit angle increases from values close to zero to very great values, which are defined as the density of the space charge and as the distribution of the potential in the gap. With small transit angles ( $\theta < \pi$ ), the reactance induced by the space charge has an inductive character, it is equal to zero when  $\theta = \pi$ , and it has a capacitive character when  $\theta > \pi$ . The very considerable changes of the induced reactances with small positive and negative anode voltages are caused by essential changes of the electron transit time. The high-frequency amplitude becomes commensurable with the constant voltages applied. The electrons do not arrive at the anode and two electron flows *X*

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SOV/162-59-1-12/27

The Reactive Properties of Planar Electron Gaps

exist in the gap, if the negative anode voltage is higher than the voltage at the grid. With a further increase of the negative anode voltage, the electron transit angle will approach zero. The reactance of an electron gap has a capacitive character, if there are two electron flows and small transit angles; its value rises with an increase in the transit angle. The author investigated resonators whose capacitive part was formed by the grid-anode gaps of GI-11B and GI-12B metalloceramic triodes. The experiments showed that the character of the changes of the natural frequency and the Q-factor of a resonator are in qualitative agreement with calculated and measured values, depending upon the conditions in the gap. The author concludes that, with certain conditions in the electron gap (transit angles), the losses are small which are inserted by a space charge, while comparatively great reactances are inserted. The sign of the inserted reactance may be positive or negative, depending

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SOV/162-59-1-12/27

The Reactive Properties of Planar Electron Gaps

upon the chosen electron flow conditions. The value of the inserted reactance may be controlled by changing the density of the electron flow entering the grid-anode gap, ie. by changing the voltage between the grid and the cathode. These properties of the impedance characteristics of the electron gap were used for controlling the frequency of a self-oscillator. One of the methods of connecting the grid-anode gap of a triode to the oscillatory circuit of the self-oscillator is shown in Fig 3. This design is obviously not the best one, but it is simple and convenient for the 180-600 Mc range. The investigation of the oscillator showed that the electron gap does not cause any losses in the oscillatory circuit. The modulation characteristics are linear as shown in a graph in Fig 4. Concluding, the author states that the aforementioned method of electronic retuning of the frequency may be used for controlling the frequency of wideband oscillators in the decimeter wave range. There are 1

Card 5/6

4

ACC NR:	AP6026938	SOURCE CODE:	UR/0141/66/009/004/0786/0793
AUTHOR:	<u>Afanasov, S. G.</u> ; <u>Shmelev, A. A.</u>		27
ORG:	<u>Gor'kiy State University (Gor'kovskiy gosudarstvenny universitet)</u>		B
TITLE:	Possibility of obtaining <u>negative resistance</u> in triodes with a control electrode behind the cathode		
SOURCE:	IVUZ. Radiofizika, V. 9, no. 4, 1966, 786-793		
TOPIC TAGS:	triode tube, electron tube grid, electrode negative resistance, volt ampere characteristic, <u>conformal mapping</u>		
ABSTRACT:	The authors discuss tubes in which the control electrode (called "grid" in analogy with an ordinary vacuum tube) in the anode are located on opposite sides of the cathode, and calculate the currents flowing in the grid and in the anode circuits when a cathode of small radius is used. The volt-ampere characteristics of such a tube are calculated for different emissivities of the side of the cathode facing the grid, and it is shown that if this emissivity is small, such a system can have a static decrease in characteristic, wherein an increase in current accompanies a decrease in voltage, thus producing a negative-resistance device. The calculations are carried out by first conformally mapping the section through the tube and determining the potential distribution corresponding to the charge in the system. It is shown that the potential distribution is the same as for an equivalent asymmetrical diode, and the total current in the system is obtained by reducing the equivalent diode to		
Card	1/2	UDC:	621.385.399: 537.533.2

AUTHOR: Afanasov, S.M.

"Electronic Retuning of Frequency of Cavity Resonators by the Reactive  
Diode Method,"  
A-U Sci Conf dedicated to "Radio Day," Moscow, 20-25 May 1957.

PERIODICAL: Radiotekhnika i Elektronika, Vol. 2, No. 9, pp. 1221-1224,  
1957, (USSR)

AFANASOV, S.N.

AID P - 3884

Subject : USSR/Power Eng.

Card 1/1 Pub. 110-a - 5/17

Author : Afanasov, S. N., Eng., All-Union Heat Engineering Inst.

Title : On dynamic properties of pulverized fuel-fired systems

Periodical : Teploenergetika, 11, 23-26, N 1955

Abstract : The authors discuss the operation and automatic control of coal mills. The importance of regular supply of air during the grinding process is emphasized and the relation between the quantity of coal and the volume of pulverized fuel explained. Six figures.

Institution : None

Submitted : No date

APPROVED FOR RELEASE 06/05/2000 AFANASOV RDP86-00513R000100410006-9"

E.K., inzh.; KUZNETSOV, B.A., inzh.

New circuit for the control of combustion in drum boilers with shaft mills. Teploenergetika 7 no.10:57-63 O '60.

(MIRA 14:9)

1. Vsesoyuznyy teplotekhnicheskiy institut i Teploelektrotsentral' Mosenergo.

(Boilers--Furnaces) (Automatic control)

AFANASOV, V.F.

Afanasov, V.F. "The reconstruction of aferroconcrete products factory,"  
Stroit, prom-st', 1948, No. 12, p. 7-9

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

"APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000100410006-9

AFANASOV, V. F.

Cand Tech Sci

Dissertation: "Methodology of Compiling the Calendar Schedules for Continuous Construction of Low Buildings."

20/10/50

Moscow Engineering Economics Inst imeni Sergo Ordzhonikidze.

**SO Vecheryaya Moskva**  
Sum 71

APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000100410006-9"

A F A N A S O V . V.

20(5)30(5)

Report, "Residential Construction Institute (Institut Strogo Ostrobozhdenia)

20/2755

Voprosy stroitel'stva elementarnykh struktury. Moshchel'kovich, V. A. (ed.)  
Moscow: Stroizdat, 1958. 1. organizatsiya stroitelnogo proizvodstva, a  
tehnicheskaya optimizatsiya proizvodstvennykh protsessov. Problemy i  
metody optimizatsii resursov v konstruktsionno-ostrobozhdenii. Sovet po  
stroitel'stvu i arhitekturam. Moscow: Gosizdat, 1959. 673 p.  
Tsentral'nyy rezhimnyy issledovatel'skiy institut po delam  
sobstvennosti. Ofitsial'nye dokumenty. Dokumenty o stroyel'stve elementarnykh struktur.  
Moscow: Stroizdat, 1958. 1. organizatsiya stroitelnogo proizvodstvennykh protsessov. 500 p.  
Metod. 2. L. N. Slobodchikov, G. A. Slobodchikova, Yu. N. Glazkov, G. A. Tikhonov, V. A.  
Korolev, A. G. Krasheninnikov, V. V. Uspenskiy, N. A. Matov, V. I. Kachanovskiy,  
A. N. Shabotov, N. N. Slobodchikova, S. D. Orlenskiy. Editorial Board of the Scientific  
Council of the Moscow Regional Committee of the Central Council of the USSR  
of the Ministry of Construction (Narcomst, Mch). Document No. 1. Vozmishchenie  
Vysotskogo, G. P. Tikhonov, G. A. Slobodchikov, V. I. Kachanovskiy, V. G. Churilov,  
V. I. Demchenko, V. I. Korolev, V. V. Uspenskiy, G. A. Tikhonov, V. A.  
Korshunov, G. P. Tikhonov, G. A. Slobodchikov, V. I. Kachanovskiy,  
S. A. Slobodchikov, V. V. Uspenskiy, V. I. Tikhonov, Professor, L. I.  
Sokolov, Professor, G. V. Feofanov, Professor, G. V. Kostyuk, Professor,  
V. V. Verbitskiy, Professor, V. V. Gol'dovskiy, Professor, V. V. Gol'dovskiy (Chairman), Doctor,  
Committee of Technical Sciences.

Predlozheniye. This collection of articles is intended for staff members of construction  
and design organizations, design bureaus, and scientific research establishments as  
well as for faculty members and students of institutions of higher education.  
Osnovnye zadaniya. This collection of reports on construction problems was originally  
presented and discussed at a scientific-technical conference held in Moscow  
in February 1958 under the auspices of the Moscow Engineering and Economic  
Institute and other environmental and scientific organizations. Possibilities  
of increasing economic benefits from capital investments by improving methods  
of organizing and planning construction projects are reviewed. Results of  
efforts by construction and design organizations to reduce the cost of con-  
struction in large-scale operations are analyzed. Measures to introduce econo-  
mies in construction units, to increase economic efficiency and  
productivity, and plans for solving problems are outlined. No financial problems in  
construction are discussed. No references are given.

Strukturev, A. N. The Scientific Methodology of Standardized Planning  
and Large-Wall Panels in the Building and Using Residential Housing

Burik, V. S. Experience Gained in Designing and Using Combined Zoning

Sokolov, I. P. Profitability of Some Measures Tending to Increase  
Labour Productivity in Building

Tikhonov, V. I. J. used at Which a Residential House Can Be Erected by  
Carrying Out Undergrouped Operations, and the Costs of Construction

El'shchikov, A. M. Determining the Number of Clouded-in Buildings During  
Construction or Residential Houses

Aleksandrov, I. P. The National Changes and Improvements in Planning Construction  
Processes to be Used During the Construction Stage

Sokolnikova, E. N. Principal Form of Creating a Proper Organisation for  
Manufacturing Reinforced Concrete Structures and Their Parts

Gard 6/1

AFANASOV, V.F., kand.tekhn.nauk

Fundamental changes and improvements of methods for planning  
building technology and operations. Trudy MIEI no.14:295-307  
'59. (MIRA 13:1)

1. Voronezhskiy inzhenerno-stroitel'nyy institut.  
(Building--Contracts and specifications)

KASHIRIN, Nikolay Vasil'yevich, kand. ekon. nauk; AFANASOV, Vasiliy Fedorovich, kand. tekhn. nauk, otd. red.

[Standardization of the consumption of materials and power resources in construction] Normirovanie raskhoda materialov i energoresursov v stroitel'stve; uchebnoe posobie. Moskva, 1962. 130 p. (MIRA 16:2)

1. Moscow. Inzhenerno-ekonomicheskiy institut.  
(Construction industry)

YEMEL'YANENKO, G.A.; AFANASENKO, V.I.

Effect of the temperature on the electrodeposition of  
chromium. Zhur. fiz. khim. 39 no.4:850-854 Ap '65.  
: (MIRA 19:1)  
1. Dnepropetrovskiy gosudarstvennyy universitet. Submitted  
July 1, 1963.

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CIA-RDP86-00513R000100410006-9

ATANASOV, V. N.

"Construction of Ground Packing in Concrete Sluices," Gidrotekh. Stroi., No. 8, 1949.

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"APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000100410006-9

AFANASOV, V. N.

"Failure of gates at lower Svir' Hydroelectric Power Plant Svirstroy, Gidrotekhnicheskoye Stroitel'stvo, No. 8, 1949 (Moscow)

APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000100410006-9"

1. AFANASOV, V. N., Eng.
2. USSR (600)
4. Locks (Hydraulic Engineering)
7. Results of a lock inspection, Gidr. stroi, 22, no. 2, 1953.
  
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

"APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000100410006-9

*AFANASOV, Vasilij Nikolayevich*  
AFANASOV, Vasilij Nikolayevich, ILINSKIY, V.A., redaktor; VOLCHOK, K.M.,

[Electrically operated concrete sluice gates] Opyt ekspluatatsii  
elektrifitsirovannykh betonnykh shliuzov. Leningrad, Izd-vo  
"Rechnoi transport," 1954. 68 p. (MLRA 8:4)  
(Sluice gates)

APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000100410006-9"

AFANASOV, Vasiliy Nikolayevich; FREYBURG, Tat'yana Yevgen'yevna; IL'INSKIY,  
V.A., Fedaktor; VOLCHOV, K.M., tekhnicheskiy redaktor

[Manual for a lockman] Posobie dlia sudopropusknikov. Leningrad,  
Izd-vo "Rechnoi transport" Leningradskoe otd-nie, 1955. 135 p.  
(Inland navigation) (Sluice gates) (MIRA 8:7)

*AFANASOV, Vasiliy Nikolayevich; SEMENOV, Petr Ivanovich; FREYBURG,  
Tat'yana Yevgen'yevna; KANIOVSKIY, Boris Sergeyevich; ILINSKIY,  
V.A., red.; VOLCHOX, K.M., tekhn.red.*

[Locks for waterways and ports] Sliuzovannye vodnye puti i  
porty. Leningrad, Izd-vo "Rechnoi transport," Leningr. otd-nie,  
1957. 384 p. (MIRA 11:1)

(Locks (Hydraulic engineering))

AFANASOV, V., inzh.

"Hydraulics" by N.L. Grigor'ev. Reviewed by V.Afanasov. Rech.  
transp. 19 no. 2:3 of cover F '60. (MIRA 14:5)  
(Hydraulics) (Grigor'ev, N.L.)

AFANAS'YEV, A.

Give youth an all-around physical and defense training. Voen.  
znan. 38 no. 2816-17 F '62. (MIA 15:2)

1. Instruktor otdela sportivnoy i oboronno-massovoy raboty  
TSentral'nogo komiteta Vsesoyuznogo Leninskogo kommunisti-  
cheskogo soyuza molodezhi.  
(Physical education and training)

AFANAS'YEV, A., inzh.; RYABAKOV, A., inzh.; SMIRNOV, A., knad.tekhn.nauk;  
TOMLYANOVICH, D., knad.tekhn.nauk.

Streetcars should have pole current collectors. Zhil-komm. khoz. 13  
no.2:16-17 '63. (MIRA 16:3)  
(Streetcars—Electric equipment)

AFANAS'YEV, A.

Editorial: Sea port operations should be improved. Mor.flot  
15 no.6:1-3 Je '55. (MLRA 8:8)

1. Chlen Kollegii Ministerstva morskogo flota, nachal'nik Up-  
ravleniya portovogo khozyaystva i mekhanizatsii.  
(Harbors) (Shipping)

BARDIN, I.P., akademik, glavnnyy red.; KORT, V.G., prof., otvetstvennyy red.  
vypuska; APANAS'YEV, A.A., red.; BAKAYEV, V.G., red.; BURKHANOV,  
V.F., red.; ZOLOTUKHIN, A.A., red.; SOMOV, M.M., red.; FROLOV, V.V.,  
red.; SHCHERBAKOV, D.I., akademik, red.; MIROHENKO, Z.I., red.;  
BRAYNINA, M.I., tekhn.red.

[Hydrological, hydrochemical, geological, and biological studies  
on the diesel-electric research ship "Ob", 1955-1956] Gidrolo-  
gicheskie, gidrokhimicheskie, geologicheskie i biologicheskie  
issledovaniia; dizel'-elektrokhod "Ob", 1955-1956 gg. (MIRA 12:2)

1. Akademiya nauk SSSR.
  2. Zamestitel' nachal'nika Kompleksnoy  
antarkticheskoy ekspeditsii Akademii nauk SSSR; nachal'nik 1-go  
reysa morskoy chasti kompleksnoy antarkticheskoy ekspeditsii Aka-  
demii nauk SSSR (for Kort).
  3. Nachal'nik Gidrograficheskogo  
upravleniya Glavsevmorputi Ministerstva morskogo flota SSSR (for  
Afanas'yev).
  4. Ministr Morskogo flota SSSR (for Bakayev).
  5. Zamestitel' nachal'nika Gidrograficheskogo upravleniya Glav-  
sevmorputi Ministerstva morskogo flota SSSR (for Burkhanov).
  6. Nachal'nik Glavnogo upravleniya Gidrometeorologicheskoy sluzhby  
SSSR (for Zolotukhin).
  7. Nachal'nik Kompleksnoy antarkticheskoy  
ekspeditsii Akademii nauk SSSR (for Somov).
  8. Direktor Arkti-  
cheskogo nauchno-issledovatel'nogo instituta Gidrograficheskogo  
upravleniya Glavsevmorputi (for Frolov).
- (Antarctic regions)

AFANAS'YEV, A.

Sea ports during the sixth five-year plan. Mor.flot 16 no.5:1-4  
My '56. (NIKA 9:8)

1. Zamestitel' ministra morskogo flota.  
(Harbors)

AFANAS'YEV, A.

Put new ship-handling techniques at the service of the merchant marine. Mr. flot 17 no.4:1-3 Ap '57. (MIRA 10:4)

1. Zamestitel' ministra morskogo flota.  
(Ship handling) (Merchant marine)

BARDIN, I.P., akademik, glavnnyy red.; KORT, V.G., prof., otv.red.; Afanas'yev,  
A.A., red.; BAKAYEV, V.G., red.; BURKHANOV, V.F., red.; ZOLOTUKHIN,  
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BOOK EXPLOITATION

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Afanasyev, Anatoliy Aleksayevich; Gorbunov, Valeriy Aleksandrovich (Candidate of Naval Sciences)

Effectiveness of target detection by radio reconnaissance means (Effektivnost' obnaruzheniya tselyey radiotekhnicheskimi sredstvami na bilyarieniya) Moscow, Voenizdat M-va Obrony SSSR, 1984. 176 p., 21 x 29 cm. Brata slip inserted. 7500 copies printed. Editor: L. N. Kuznetsov. Technical editor: Zudina, N. P.; Proofreader: Uzlova, I. N.

TOPIC TAGS: detection system, optical detection, radio reconnaissance, target detection

PURPOSE AND COVERAGE: This book was written for army and navy officers, academy and college students, and specialists in civil aviation, the navy, and the merchant marine, as well as for those connected with the application and development of radio-engineering and optical means of reconnaissance and concerned with investigation of the effectiveness of these means. The general theoretical bases and methods of quantitative evaluation of the effectiveness of technical means of

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reconnaissance in solving the problem of search for and detection of targets are presented in the book, and methods of determining the required quantitative characteristics of the reconnaissance capability of target-detection means under different conditions of search are analyzed.

TABLE OF CONTENTS:

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Ch. II. Characteristics of instantaneous probability of target detection in the cases of both continuous and discrete reconnaissance -- 16
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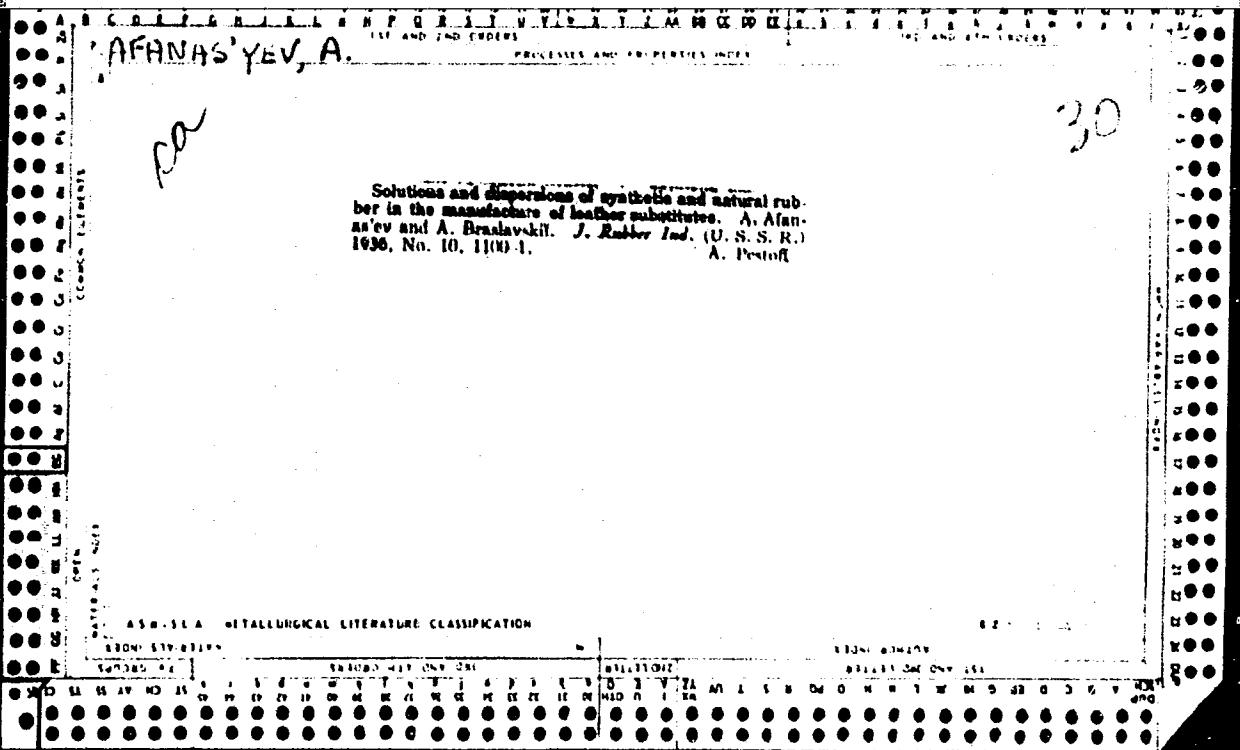
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B

AUTHOR: Chilikin, M. G. (Doctor of technical sciences, Professor);  
Arakelyan, A. K. (Candidate of technical sciences); Afanas'yev, A. A. (Engineer)

44,55

ORG: Moscow Power-Engineering Institute (Moskovskiy energeticheskiy institut);  
The Volga Branch of MEI (Volzhskiy filial MEI)

44,55

TITLE: Some potentialities of the commutatorless d-c drive

SOURCE: Elektrichestvo, no. 9, 1965, 7-12

TOPIC TAGS: electric power drive, dc power drive, commutatorless motor

21

44,55

ABSTRACT: A theoretical and experimental investigation of a synchronous motor supplied by d.c. via a d-c/a-c inverter is presented. The inverter designed with thyratrons or semiconductor devices is synchronized with the rotor by means of a rotating emf induced in the stator windings by the rotor field. By setting a

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definite relation (formulas are developed) between the motor mechanical load and the excitation current, static and dynamic stability can be achieved which precludes out-of-step conditions on overloads. Inverter-power and motor mechanical characteristics are shown; they are constructed from experimental data obtained with this motor: 4.5 kw, 127 vac, 15.6 amp, 1500 rpm; stator-winding synchronous leakage reactance, 1 ohm. An electric drive based on the above motor permits providing a two-range continuous speed adjustment within wide limits. The system is recommended for driving mechanisms that require wide-range speed adjustment and large high-speed synchronous motors. Orig. art. has: 5 figures, 45 formulas, and 4 tables.

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KUTOKOV, A.I.

Sakhalin petroleum. Neft. khoz. 42 no.9/10:84-88 S.O '64.  
(MIRA 17:12)

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AUTHOR: Afanasyev, A.F., Engineer

96-58-2-1/23

TITLE: The Modernization and Extension of the Electric Power Stations of a Large Metallurgical Works (O modernizatsii i rasshireniu elektrostantsiy krupnogo metallurgicheskogo zavoda)

PERIODICAL: Teploenergetika, 1958, No 2, pp 3 - 7 (USSR)

ABSTRACT: In the past, many industrial power stations were not connected to the general power system and were often fitted with condensing-type turbines instead of using back-pressure or pass-out turbines. It is now necessary to decide what to do with these low-efficiency medium-pressure stations. Modernization by the super-position on existing sets of super-high-pressure sets is of particular value for metallurgical works which use process steam, compressed air, oxygen and low-grade heat as well as electricity.

This article describes Tsentroenergochemet's proposals for modernizing and extending the power stations of a large metallurgical works which is itself being enlarged. The existing works had two installations for forced-air supply, a central electricity station and a heat and electricity station.

Modernisation will be by superposed equipment and extension of the existing stations. The works will also be connected through

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a transmission line with the regional power system. The works requires up to 1 200 t/h of process steam at a pressure of 7 - 18 atm. and district heating will call for up to 1 300 Mkcals/h. The proposed methods of reconstruction of the different stations are described in detail and a thermal diagram of the existing and proposed arrangements is given. Condensing turbines will not be installed. The use of "packaged" equipment, full automation and the mechanization of heavy work at the stations will reduce staffing and power costs. The main performance figures of the works' electric power stations before and after modernization and extension are tabulated. Two 50 MW turbines will be installed and most of the works' requirements of electric power will be met. The project for modernization and extension of the Central Power Station is then described in some detail; the schematic circuit diagram of the equipment is shown in Fig.2 and the proposed layout in Fig.3. The winter peak load will be met by running all the turbines except two under back-pressure conditions. The physical lay-out of the plant is discussed. It is based on "packaged" units.

Card2/3 Analysis of the plans shows that with the introduction of high-

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efficiency regional power stations, only those industrial power stations that can be conveniently modernised should be retained. These stations, being connected to the main systems, should always furnish both electricity and process heat. The super-position of super-high-pressure equipment on medium-pressure power stations and the conversion of existing condensing turbines to pass-out operation in winter are effective measures for reducing fuel consumption and power cost.

There are 3 figures and 1 table.

ASSOCIATION: Tsentroenergochernet

AVAILABLE: Library of Congress

Card 3/3      1. Power systems-Revision

SOV/96-59-4-5/21

AUTHORS: Afanas'yev, A.F., Engineer and  
Kertsellii, Yu.I., Engineer

TITLE: On Raising the Efficiency of Existing Industrial Power  
Stations (K voprosu o povyshenii ekonomichnosti  
deystvuyushchikh promyshlennnykh elektrostantsiy)

PERIODICAL: Teploenergetika, 1959, Nr 4, pp 27-31 (USSR)

ABSTRACT: The subject is discussed in relation to an article by  
V.N.Yurenev published in Teploenergetika, 1958, Nr 4.  
The improved thermal efficiency that can result from the  
use of high initial steam conditions in large turbo-  
generators is discussed. Conditions are somewhat different  
in small turbines where the effect on the internal  
efficiency of the turbine that results from changes in  
temperature and pressure must be considered. The  
relationship between the internal efficiency of a turbine  
and the amount of steam passed through it is plotted  
graphically in Fig.1. The advantages of superposing on  
existing stations new sets with high steam conditions are  
discussed and it is stated that complex modernization of  
large uneconomic existing power stations burning expensive

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On Raising the Efficiency of Existing Industrial Power Stations

fuel is an important measure of fuel economy. The greatest effect is obtained from modernization when superposed turbines are used with the highest possible steam conditions particularly when the existing turbines can be used for heat supply and the existing medium and low pressure boilers can be used as reserve for the industrial steam load, taking the peak of this and of the district heating loads. Although the authors are in general agreement with Yurenev, in the light of the discussion so far they raise objection against a number of particular points made by Yurenev. In particular, they do not like his suggestion to use steam pressures of 35 atm in super-position. Steam conditions of 130 atm and 240 atm, which are not considered in the original article, are to be preferred. Yurenev recommends the use of impaired

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On Raising the Efficiency of Existing Industrial Power Stations  
vacuum in the old turbines but these authors prefer to  
use back pressure wherever possible. There are 4 figures,  
2 tables and 4 references of which 3 are Soviet and  
1 German.

ASSOCIATION: Promenergoprojekt-Tsentroenergochemet

Card 3/3

AFANAS'YEV, A.F., insh.

Modernization of large industrial electric power plants. Prom.energ. 14  
no.2:16-21 F '59. (MIRA 12:3)

1. Promenergoprojekt.  
(Electric power plants)

AFANAS'YEV, A.P., inzh.

Data pertaining to some electricity and heat plants during 1956  
and 1957. Energokhoz. za rub. no.2:13-16 Mr-Ap '60. (MIRA 13:6)  
(Heating from central stations) (Electric power plants)

AFANAS'YEV, A.F., insh.

Small industrial power plants in the Federal Republic of  
Germany use steam at a temperature of 600° C. Teploenergetika  
7 no.5:88-92 My '60. (MIRA 13:8)  
(Germany, West--Steam power plants)

AFANAS'YEV, A.F.

Concerning certain trends in the development of industrial and  
municipal thermal electric power plants in the German Federal  
Republic. Prom. energ. 15 no.7:51-53 Jl. '60. (MIRA 15:1)  
(Germany, West—Electric power plants)

AFANAS'YEV, A.F., inzh.

Heating from central stations in the cities of the German Federal Republic. Teploenergetika 8 no.6:86-90 Je '61. (MIRA 14:10)  
(Germany, West--Heating from central stations)

AFANAS'YEV, A.F., inzh.; KERTSELLI, Yu.L., inzh.

Some problems of electric power supply for small and medium capacity industrial enterprises. Teploenergetika 8 no.11:67-72  
N '61. (MIRA 14:10)

1. Promenergoiprojekt i TSentroenergochermet.  
(Heating from central stations)  
(Electric power plants)